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employing said wafer-handling device to sort the wafers by transferring wafers between the first cassette and the second cassette, wherein the chamber is sealed.

15. (Twice Amended) A method for assembling a batch of wafers in cassettes comprising the steps of:

placing at least a first and a second closed cassette in a store;

employing a cassette handling device to select and move a first cassette from the store to a first closable opening in a sealed chamber;

opening said first closable opening together with said first cassette;

employing a cassette handling device to select and move a second cassette from the store to a second closable opening in said sealed chamber;

opening said second closable opening together with said second cassette;

employing the wafer-handling device, provided in said sealed chamber, to sort the wafers by transferring wafers between the first cassette and the second cassette.

REMARKS

Amendments

Claims 8-15 are pending in the present application. Applicants have amended Claims 13 and 15 to correct grammatical errors and match follow-on recitations with their antecedent bases. Applicants submit that the amendments place the claims in better condition for allowance and respectfully request entry thereof.

Attached hereto is a separate paper entitled **VERSION OF THE AMENDMENTS SHOWING CHANGES MADE**, in which additions are shown in double underlining and deletions are shown ~~stricken through~~.

Rejections in View of Prior Art

Each of the pending claims have been rejected either as anticipated under 35 U.S.C. § 102(e) by newly cited reference Muka (U.S. Patent No. 6,079,927) or as obvious under 35 U.S.C. § 103(a) over Muka in combination with one or more secondary references.

Applicants respectfully traverse the rejections and submit that the rejections are based upon a misunderstanding of the invention. Each of the pending claims recites a device or method for transferring wafers between cassettes. Muka, in contrast, teaches no such function.

As is clear from the application as filed, the present application is directed to an apparatus and method combining several functions which are more commonly provided in separate housings. One of those functions accomplished by the preferred embodiment is a sorting function. *See* application at p. 3, lines 27-30, p. 4, lines 14-20. Figure 2 of the present application, for example, clearly shows two cassettes 18 and 19 interfacing with the wafer transfer robot. The application at page 5, line 25, to page 6, line 4, describes two cassettes at different levels of the turntable 30 being accessed by the wafer transfer robot 24. The wafer transfer mechanism 24 is also referred to as a "sorting device 24."

Furthermore, each of the pending claims explicitly recites the sorting function. For example, Claim 8 recites the fact that "the wafer-handling device is adapted to transfer the wafers between cassettes." Claim 13 recites moving first and second cassettes "to a sorting operation," and "transferring wafers between the first cassette and the second cassette." Claim 15 similarly recites "employing the wafer-handling device ... to sort the wafers by transferring wafers between the first cassette and the second cassette." Each of the remaining claims depend from one of independent Claims 8, 13, and 15.

Muka nowhere discloses or suggests an apparatus configured for sorting wafers between two cassettes. Rather, in each instance, in every discussion of a wafer transfer mechanism 32 (Figure 1), 230, 232 (Figures 3 and 4) and 252 (Figure 5), Muka explicitly disclosed that wafers are transferred from a cassette or FOUP to a processing system, or vice versa. There is no teaching or suggestion of transferring wafers from one cassette to another cassette.

Accordingly, Applicants' invention, as recited in the pending claims, accomplishes an entirely different function from that disclosed in the entirety of Muka. In view of the foregoing, Applicants respectfully submit that the cited references do not teach each and every feature of the pending claims.

Applicants submit that the remainder of the rejections are moot in view of the lack of teaching in Muka with respect to wafer sorting. Nevertheless, Applicants address the further findings of the Examiner with respect to combining the measuring function into the same device

or method to avoid any finding of acquiescence. Applicants respectfully submit that the Examiner summarily combines separate teachings with respect to measuring, storage, and sorting with no analysis as to how or where such functions would fit into the structure and method of the primary reference Muka. As Muka himself asserts, "semiconductor device manufacturers prohibit footprint increases due to the larger wafer size unless a proportional wafer processing throughput occurs." Muka at Col. 1, lines 56-58. In view of such considerations, Applicants respectfully submit that the skilled artisan would not simply combine functions in the manner that the rejections assert without first arriving at an understanding that the combination would increase throughput for the given increase in footprint. Applicants respectfully submit that the asserted combinations fail to appreciate such considerations, which are second-nature to designers of semiconductor manufacturing equipment.

Accordingly, in view of the fact that the primary reference Muka contains no teaching whatsoever with respect to transferring wafers between cassettes by a wafer-handling robot, Applicants respectfully submit that the pending claims are allowable over the art of record.

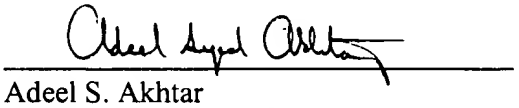
CONCLUSIONS

In view of the foregoing remarks, Applicants respectfully request reconsideration of the final rejections and submit that the application is in condition for allowance and respectfully requests the same. If, however, some issue remains that the Examiner feels can be addressed by Examiner's Amendment, the Examiner is cordially invited to call the undersigned for authorization.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: August 7, 2002

By: 

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VERSION OF THE AMENDMENTS SHOWING CHANGES MADE

IN THE CLAIMS:

Claims 13 and 15 have been amended as indicated below.

8. (Amended) A device for sorting wafers stored in cassettes comprising:

a housing;

a wafer handling device arranged in a chamber configured to be sealed off with respect to the housing;

a part for receiving at least two closable cassettes arranged in the housing and separated from said chamber by a partition, said part configured to position a received cassette against a closable opening in said partition, wherein through opening of said closable opening said closable cassette is opened and placed in communication with said chamber so that said wafer handling device can remove wafers from the cassette or position them therein;

a store for closable cassettes arranged in the housing; and

a handling device for closable cassettes arranged in the housing, wherein the store for closable cassettes and the handling device for closable cassettes are separated from the part for receiving at least two cassettes, and wherein the wafer-handling device is adapted to transfer the wafers between cassettes.

9. (Amended) The device of Claim 8, wherein the device is configured for sorting wafers stored in FOUPs.

10. The device of Claim 9, wherein the chamber comprises a measuring station functionally connected with the wafer-handling device.

11. The device of Claim 8, wherein the part for receiving at least two cassettes comprises a turntable.

12. The device of Claim 8, wherein the store for cassettes comprises a rotatable magazine.

13. (Twice Amended) A method for assembling a batch of wafers in cassettes comprising the steps of:

placing at least a first and a second closed cassette in a store;

employing a cassette handling device to select and move the first cassette from the store to a sorting operation, wherein the first cassette is opened and placed in active connection with a wafer handling device in a chamber;

employing a cassette handling device to select and move a second cassette from the store to a sorting operation, wherein the second cassette is opened and placed in active connection with said wafer handling device in said chamber; and

employing said wafer-handling device to sort the wafers by transferring wafers between the first cassette and the second ~~cassettes~~ cassette, wherein the chamber is sealed.

14. The method of Claim 13, further comprising the step of testing the wafers during sorting the wafers.

15. (Twice Amended) A method for assembling a batch of wafers in cassettes comprising the steps of:

placing at least a first and a second closed cassette in a store;

employing a cassette handling device to select and move a first cassette from the store to a first closable opening in a sealed chamber;

opening said first closable opening together with said first cassette;

employing a cassette handling device to select and move a second cassette from the store to a second closable opening in said sealed chamber;

opening said second closable opening together with said second cassette;

employing the wafer-handling device, provided in said sealed chamber, to sort the wafers by transferring wafers between the first cassette and the second ~~cassettes~~ cassette.

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